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ABSTRACT

This report describes a staff development training using a multimedia instructional technology program designed to increase the integration of multimedia materials by teachers into their curriculum. The objectives were for the teachers in the targeted group to demonstrate an increased use of instructional technology by generating products using four out of eight skills in which they had been instructed and for 20% or more of the targeted group to attain more skills to operate and integrate various technological hardware and software programs. A target group of 14 teachers involved in regular education was established for the program. The 12-week program focused on staff development of computer-related technology so that as teachers gained expertise they would transfer their knowledge to their students. The program contained various activities and strategies using multimedia instructional technology for the improvement of these skills. Levels of success were measured by a pre- and post-teacher technology survey as well as products generated and recorded on a technology profile checklist. Appendices include tables showing the pre- and post-teacher technology skills survey and results in percentages, and a teacher technology portfolio checklist. (Author)

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HELPING TEACHERS INCREASE THE USE OF MULTIMEDIA INSTRUCTIONAL TECHNOLOGY INTO THE CURRICULUM THROUGH STAFF DEVELOPMENT WORKSHOPS

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by

Liliana P. Garcia

A Final Report submitted to the Faculty of the
Fischler Center for the Advancement of Education of
Nova Southeastern University in partial fulfillment
of the requirements for the degree of
Master of Science

An abstract of this report may be placed in the
University database system for reference.

1999/May

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Abstract

Helping Teachers Increase the Use of Multimedia Instructional Technology into the Curriculum through Staff Development Workshops.
Garcia, Liliana P., 1999. Practicum Report, Nova Southeastern University, Fischler Center for the Advancement of Education.
Descriptors: Multimedia Instructional Technology/Staff Development/Technology Integration/Technology.

This report describes a staff development training using multimedia instructional technology program implemented by the writer to help increase the integration of multimedia instructional technology by teachers in their curriculum. The objectives for the program were for the teachers in the targeted group to demonstrate an increased use of instructional technology by generating products using four out of eight skills in which they had been instructed and for 20% or more of the targeted group to attain more skills to operate and integrate various technological hardware and software programs. A target group of 14 teachers involved in regular education was established for the program. The 12-week program focused on staff development of computer-related technology so that as teachers gained expertise they would then transfer their knowledge to their students. The program contained various activities and strategies using multimedia instructional technology for the improvement of these skills. Levels of success were measured by a pre- and post-teacher technology survey as well as products generated and recorded on a technology portfolio checklist. Appendices include tables showing pre-and post-teacher technology skills survey and results in percentages, and a teacher technology portfolio checklist.

Authorship Statement

I hereby testify that this paper and the work it reports are entirely my own. When it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of others in the field and in the hope that my own work, presented here, will earn similar respect.

Liliana García
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Practicum title: Helping Teachers Increase the use of Multimedia Instructional Technology into the Curriculum through Staff Development Workshops

Student's name: Liliana Garcia Completion date: 3-12-99

Project site: Fienberg Fisher Elementary School

Mentor's name: Grace Nebb (*print*) Grace Nebb (*signature*)

Mentor's position at the site: Principal Phone #: 305 531-0419

Comment on impact of the project (handwritten):

The project helped teachers attain certain skills needed for them to infuse technology into their lessons. More staff development opportunities where effective use of instructional technology can be integrated into the curriculum is being planned for the next school year.

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Table of Contents

Page

Abstract....ii

Authorship/Document Release....iii

Project Verification....iv

Chapters

I. Purpose....1

II. Research and Planned Solution Strategy....8

III. Methods....19

IV. Results....30

V. Recommendations....33

Reference List....34

Appendixes

Appendix A: Teacher Technology Skills Pre-Survey....36

Appendix B: Teacher Technology Skills Pre-Survey Results....37

Appendix C: Technology Portfolio Checklist....38

Appendix D: Technology Portfolio Checklist Results....39

Appendix E: Teacher Technology Skills Post-Survey....40

Appendix F: Teacher Technology Skills Post-Survey Results....41

Appendix G: Power Point Basics....42

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Chapter I

Purpose

Background

The educational program setting is located in a large, very popular metropolitan area. There are approximately 50 countries and languages represented. The immediate community is one of rental apartments and hotel units with a high transient population. Presently, the community is undergoing many changes, renovations, and reconstruction, which have begun to lower the student enrollment of the school. The student population of the school community is of predominantly low socioeconomic status with 89% eligible for free or reduced lunch.

The facility sits on seven acres of land spanning three city blocks and was established in 1925. Although it has had major renovation in recent years, the school is constantly being serviced and repaired structurally. The school campus encompasses a full service building, an adult community school, two head start trailers, and a gymnasium.

Over the past six years, this school has embraced numerous educational reform initiatives that have affected the school. Four years ago, the school adopted the Comer Child Development philosophy and today serves as a model Comer School for the county. In 1996, the Child Development Center at Yale University recognized the school's principal as a Comer Principal of the Year. Academically, the school piloted the IBM Eduquest Teaching and Learning with Computers program which placed five computers in each classroom. The school continues to use over 200 computers to integrate technology across the curriculum. In May 1997, the faculty agreed to pilot the Science Research Associates (SRA) reading program. After extensive training, the entire staff is implementing the program. In addition, two kindergarten and two first

grade classes are piloting the Bilingual Program in which the students spend half a day in an English speaking environment and half a day in a Spanish speaking environment.

Five years ago the school became a Full Service school providing a variety of educational, health, recreational and cultural services to its multi-cultural, multi-ethnic, and multi-lingual community. A local university and a neighborhood clinic jointly operate the health clinic, which is staffed by a full time nurse practitioner, a lab technician and medical students. Social service providers include Legal Services and Children's Psychiatric Center.

By way of on site Community Involvement Specialists, parents participate in various educational workshops and seminars presented by prominent leaders of the community which has helped increase parental involvement. The Full Service programs reduce some of the barriers to learning that this student population encounters.

Last year, the school became an Exceptional Student Education (ESE) Center housing a Bertha Abbess Children's Center (BACC) for Severely Emotionally Disturbed (SED) students and Emotionally Handicapped (EH) students. BACC classes are unique because they have two full time teachers in each class. The ESE department also includes two Emotionally Mentally Handicapped (EMH) classes, two gifted classes, and three Specific Learning Disability (SLD) classes.

The school educates 937 students in grades Pre-Kindergarten through Sixth as well as, houses a Day Care Center for birth to three-year-olds. The student population of the school is composed of 77% Hispanic, 10% Black, Non-Hispanic, 11% White, Non-Hispanic, and 2% Asian/Indian/Multiracial. The percentage of students who are of Limited English Proficiency is 40 with 320 students qualifying for ESOL services. The average teacher to pupil ratio is 22:1. The faculty and staff consists of one principal, three assistant principals, 47 classroom teachers,

18 exceptional student education teachers, one guidance counselor, one social worker, one media specialist, 8 paraprofessionals and three security monitors, 5 office employees and 10 custodians. The ethnicity of the full-time staff is 34 percent White Non-Hispanic, 24 percent Black Non-Hispanic, 41 percent Hispanic, and one percent Asian/American Indian.

The writer of this proposal has taught various classes at the school over the past six years. The writer has taught Spanish to Spanish speakers, Content Curriculum in the Home Language, first and third grade. Presently, the writer is the Library Media Specialist. As the Library Media Specialist, the writer has three roles to perform including information specialist, teacher, and instructional consultant in order to connect the information resources and services of the library to the information needs and interests of the school's staff and students. The writer will be working on this project in collaboration with two other teachers from this school. One teacher has a self-contained third grade class consisting of students of Limited English Proficiency with ESOL levels 1-4. The other teacher has an ESOL/Language Arts pullout program teaching fifth and sixth grade students.

Problem Statement

Four years ago, the school piloted The IBM Eduquest Teaching and Learning with Computers program which placed five computers in each classroom. The school has over 200 computers to integrate technology across the curriculum. The teachers received extensive training on hardware and software to prepare them for the implementation stage. A review of the workshops shows that every teacher at the school during the implementation stage initially participated in five hours of training on the hardware and ten hour of training on the reading and writing software. The workshops were conducted at a training center off campus. A trainer then provided on site support once or twice a week for the subsequent two years modeling lessons,

conducting additional training on site and working one-on-one with the teachers. Therefore, all but four of the teachers in the target group, who are new to the school, have an extensive background in computer hardware and software peripherals as well as experience in a learning centers approach.

The first two years of the IBM Eduquest Teaching and Learning with Computers, the administration mandated that all teachers use the program, which included using a learning centers approach in their Language Arts and Math curriculum. A technology representative was assigned to monitor and support the faculty's use of the computers. After interviewing the technology representative, it was determined that during the first two years of implementation, student logins in grade three, five, and sixth revealed that 85% of the students used the computer for Language Arts and Math. Last year, the administration became concerned with the students' inability to read in the intermediate grades and so the emphasis became reading. Last year, during the 1997-1998 school year, the faculty began using a new reading program by Science Research Associates (SRA). Although the teachers were encouraged to use the computers to integrate, as best they could, into their curriculum it was not an administrative mandate. The use of the computers began to dwindle due to lack of time and lack of constant support. Some teachers still use the computers as a student reward rather than as part of their curriculum.

Last year, the writer became the Library Media Specialist at the school. The writer noticed that few teachers were using the Library Media Center's collection, especially the nonprint materials and the technology resources, to support their instruction. The audio visual storage room was half full of unused audiovisual equipment. The computer stations, including the five Internet stations and the word processing station were used only by a handful of

computer savvy teachers and their students. The teachers did not know how to use Miami-Dade County Public School's On-line Catalog database, IMPACT, to locate a book in the library.

One of the writer's goals this year was to increase use of multimedia instructional technology across the curriculum. To determine the needs of the target group, the investigator created a teacher technology survey with a rating scale one to five, one being the least and five being the most (Appendix A). The investigator conducted the survey at the beginning of the 1998-1999 school year and tallied the results (Appendix B). The writer totaled all tallies for 1-strongly disagree, 2-disagree and 3-neutral to arrive at the percentages of teachers unable to perform a skill. The neutral answers were added to the disagree answers because it was the writer's opinion that a neutral answer indicated that the respondents were not sure of their level of expertise and therefore, lacked knowledge in that particular skill. After calculating the percentages, the writer determined that over 50% of the 15 teachers in the target group lacked knowledge in 12 of the 26 skills surveyed. Eighty percent of the target group said they were able to perform only one of the skills, which was using the overhead projector. Furthermore, 53% of the target group said they did not integrate multimedia instructional technology into their curriculum. Paradoxically, 80% of the target group said they used the Library Media Center's materials and resources. Additionally, 87% of the target group said that they provided for a variety of learning styles in their classroom.

The targeted group, which was selected because the collaborating teachers for this practicum teach those grades, consisted of 15 teachers in the third, fifth, and sixth grades. There are five third grade teachers. Four of the third grade teachers were not at the school during the IBM computer training. Two of the five third grade teachers are new to this grade level. One of the third grade teachers is the collaborating colleague in this practicum. There are five fifth grade

teachers. One of the fifth grade teachers teaches At-Risk students. There are four sixth grade teachers all of who have been teaching over 20 years. One of the sixth grade teachers was unwillingly transferred to this grade level from Kindergarten. One of the sixth grade teachers teaches the Comet Lab, which contain At-Risk students. There is also one ESOL pullout teacher who is the other collaborative colleague in this practicum. The ESOL pullout teacher teaches fifth and sixth grade students Language Arts in two-hour blocks.

Upon careful analysis of the surveys and discussions with the Technology Representative at the school, it was determined that teachers lacked skill and expertise in basic hardware and software technology. This lack of self-efficacy deters teachers from integrating multimedia technology in their instructions. It is imperative that all personnel become familiar with and feel confident when using instructional technology.

Outcome Objectives

The problems this writer was addressing was related to the availability and use of multimedia instructional technology, the training of teachers, and the problems experienced in introducing technology in school. In order for technology to be integrated across the curriculum, both teachers and students must feel the importance of technology in the learning process. Furthermore, teachers' levels of comfort and knowledge of hardware and software directly impacts their willingness to integrate technology into their lessons. Therefore, teachers must have access to multimedia technology, receive training, and have on-site support. The goal of this practicum was to enhance the use of multimedia instructional technology into the curriculum.

The writer implemented a "Staff Development Workshops Using Multimedia Technology" program with 15 teachers in the targeted group for 12 weeks. The proposed objectives were:

1. After 12 weeks of participating in a project using technology, the teachers in the target group will demonstrate increased use of instructional technology by generating documents using four out of six skills in which they have been instructed as evidenced by a technology portfolio checklist (Appendix C).

2. After a 12-week program of participating in a project using technology, the target group will gain 20% more skills to operate and integrate various technological hardware and software programs as evidenced by The Teacher Technology Survey (Appendix A).

Chapter II

Research and Planned Solution Strategy

Since the 1980's, the evolution and advent of technology in the areas of computing, telecommunications, and information processing have been overwhelming. Nonetheless, the widespread infusion of multimedia instructional technology into the classroom has yet transpired:

> There has been a major systemic barrier to all previous attempts at technology-supported educational improvement, and this barrier still stands in the way of applying these exciting new concepts in schools. ...As a result, America's schools remain largely a technology-free zone (Rhodes, 1995: 35).

According to Fulkerth (1992), an important and largely unspoken promise of educational technology use during the last decade was the idea that educators would be able to "figure out" computers. Then it was thought, that they could give needed credibility to an educational system seen as always being ten years behind the times. Teachers are expected to learn how to operate a time-consuming, creative new technology, to integrate it into the curricula, and at the same time delineate its larger role in our schools.

Knowing how much teachers comprehend about technology and how much they use it in the classroom is essential for those of us who must plan staff development activities. In order for staff development to be effective, it should stress the skills that teachers must learn to affect students in the classroom (Atkins and Vasu, 1998). Based on this premise, Atkins and Vasu developed a model for technology staff development that emphasized three areas: writing and communications skills, information access and management, and construction and productivity. They then developed a type of needs assessment survey and called it the Teaching with

Technology Instrument. The instrument was used to determine the types of technology training that a school needs to offer its teachers.

Technology professional development programs apparently fail to address adequately the varying levels of teacher backgrounds and interests (Moursund, 1997-1998). The use of technology resources will increase when staff developers determine their teachers' knowledge levels and technology use in their instruction. Moursund summarizes eight levels of knowledge and stages of concerns that need to be addressed in order for there to be an effective program for professional development. An effective professional development program ought to specifically address the concerns of the educator and builds on the current level of knowledge and use. Moursund developed a list of Stages of Concern and Levels of Knowledge (SC&LK) Model suited for microcomputers, and information technology (IT) tools such as CD-ROMs, networking, digital cameras, and scanners. The first level is the Awareness level where there is an awareness of microcomputers and other IT tools but professional or instructional use of them is not made.

The second level is Informational where the user has a novice level of microcomputer knowledge and other IT knowledge and skills however, not enough for professional use. The third level is the Personal level where the user begins to use microcomputers and other IT tools in their professional work. The fourth level is Time where concerns about the time needed to learn about IT and its rapid changes in educational applications are expressed. The fifth level of knowledge is the Consequence level where the user uses IT and is concerned about the effects IT tools have on their professional work and their students. The sixth level is Collaboration where the user helps a colleague with an IT hardware or software problem informally. The seventh level is Refocusing where the user feels comfortable using IT and helps colleagues learn about

IT. The eighth level is Leadership where the user becomes a technology leader and a high-level facilitator. This SC&LK scale can be used to do a needs assessment in school which will then facilitate the design of professional development opportunities appropriate to the needs of the teachers. A key to ensuring effective use is the knowledge of the person at the front of the classroom (Solomon & Solomon, 1995).

Harvey (1998) said that before a program can be effective, two critical elements needed to be analyzed: 1) the parts of technology the staff felt were most important for them to learn, and 2) a training model that would be functional so that every staff member felt comfortable with using and integrating the technology into their classrooms. To meet the first element, a one-page survey was distributed during a faculty meeting and then collected on the spot. For the second element, with administrative support, a model was created to train each staff member and provide accountability for the training based on projects and authentic learning experiences for the learners. Furthermore, the staff had a homework assignment in which they needed to use this technology in an authentic application and create a project they could use. Learning projects were designed so that the teachers would have an immediate use for the technology and see how the technology would work in their classroom. In addition, two models were developed in which training was conducted by location in the building and grade levels.

Christopher Moersch (1995) stated that nationwide, a few distinct patterns emerged regarding the infusion of technology. Staff development opportunities were often inadequate and misdirected; most computer technology was used for isolated activities unrelated to the instructional topic; and the link between technology and identifiable instructional objectives was often not made. The author proposed seven distinct implementation levels teachers could demonstrate ranging from nonuse (level 0) to refinement (level 6). As a teacher progressed from

one level to the next, changes in the delivery of a curriculum and the evaluation practices became evident. To achieve the transition to a technology enriched curriculum Moersch recommended that schools:

1) emphasize staff development
2) link technology with long-range instructional goals
3) use technology across the curriculum

The key to ensuring effective use of instructional technology is professional development. Moersch addressed self-efficacy issues suggesting that individuals with a low level of self-efficacy will often choose a level of innovation that they believe they can handle, which may or may not be the best or most effective option. All instructional personnel must become familiar with and be able to use instructional technology to its fullest potential.

Solomon and Solomon (1995) asserted that when teachers believed technology addressed a need, solved a problem, made life easier or offered information they could not otherwise get, they would use it. Solomon and Solomon listed 10 tips to improve staff development. The number one piece of advice was to offer training that would enable the participants to determine how, when, and why technology made a difference in student learning. The next tip was to give educators technology to take home and use. The third suggestion was to provide on-site support for staff. Teachers are naturally drawn to those who give their support and time. This is particularly important with technology, because people learning to use new tools require time and a supportive environment. Teachers who provide their time and support will find themselves in positions of respect (Fulkerth, 1992). Teachers often referred to technological failures as reasons for not using computers, so support was fundamental to reduce frustration and rejection. The remaining tips included encouraging collaboration with colleagues, sending professionals to

conferences, and providing practice time. Celebrating successes and accomplishments was the final tip because it encouraged people to continue as well as, sparked growth.

The Software Publishers Association on the Effectiveness of Technology (1995) in schools summarized research conducted between 1990 and 1995. This study found that inservice or college-level teacher training gave teachers a greater degree of comfort in using technology, increased their willingness to use technology, and enhanced their understanding of how to effectively integrate educational software into the specific subject curriculums. Educational institutions should create a training infrastructure where the learning has relevance to the instructional technological goals:

> On-site trainers should be selected by their local staffs. These teachers understand local problems and know the individual staff members, so they can tailor their training...to individual needs. (Finkel, 1993:18).

Therefore, inservice training must be provided to supply teachers with the capabilities to make effective use of available technology. Training should be done in small groups and with a practical approach. Another key method for staff development is to allow faculty members to borrow technological equipment and software to review and use at home after training sessions have begun.

Weiner's (1994) practicum report described a program containing various activities and strategies using multimedia instructional technology to improve performance in social studies by sixth grade students. Weiner believes one of the factors contributing to low student achievement is the delivery method of instruction. Weiner cites multiple benefits for the use of multimedia instructional technology. It can be designed to meet the needs of individual learning styles. The operational pace is controlled by the learner who in turn creates what is learned. Advanced students can move rapidly to the completion of tasks, while those who are less able and

sometimes overlooked, can progress at a comfortable rate. Therefore, this technology is non-threatening to the students. Computer-based instruction is a participatory experience, which produces a thought-provoking environment that counteracts learner inactivity. The use of multimedia technology:

> stimulates all of the learning paths by offering information through pictures, written text, sound, animation, and video to help teachers develop creative, interactive teaching tools to present information in all the ways people think and learn (Gates 1993:35).

Nelson (1995) used Gardner's Multiple Intelligence's Theory to reach many of her otherwise turned-off kids by discovering their special ways of being smart. Nelson changed the way she taught so as to meet a wider range of learning styles. Two approaches used by Nelson (1995) include thematic units and an open-ended exploration of the seven intelligences through classroom flow areas or learning centers. In many of the centers technology is used. For example, in the Verbal-Linguistic flow area a language lab is set up with a cassette player, cassettes, and earphones. Also, a writing center with a computer might be made available for different types of writing. In the Spatial flow area a video camera, VCR, and videotapes are made available for students to make a short classroom documentary.

Try as they might to avoid it, teachers have become more cognizant of technology as an increasing component of their work. Educators are becoming increasingly aware that technological hardware, software programs and tools, as well as the Internet are not only accessible but also plentiful (Olliff & Spillman, 1997). It is no longer a question of using what is available but more a matter of selecting from a plethora of technological possibilities.

According to Olliff and Spillman (1997), teachers have a tendency to tiptoe around and into the software, until they become more efficient technology users. At the beginning, they usually learn to use the software tools of technology such as e-mail, word processing and gradebook management. As the teachers become more familiar and feel more at ease with technology, they begin searching for other ways to select and evaluate technology, to make knowledgeable instructional decisions, and choices of how selected software is incorporated into classroom instructional goals and plans. Teachers must find a framework for analyzing technology and enabling it to be used to its fullest potential.

Olliff & Spillman (1997) stated that the greatest enemy of teachers is lack of time, so it is important to them to use time wisely and efficiently and avoid materials that do not match students' growth. Selecting authentic experiences for students is important to most teachers. The teachers' responsibility is to match the use of technology with students' needs.

Fulkerth (1992) ascertained that attaining even minimal computer skills requires a sizeable investment of time. In order for a teacher to take the further step in integrating technology use into the classroom environment, requires a commitment of even more time and energy. Nonetheless, use of technology continues to grow at a slow steady pace. Fulkerth (1992) suggested that the most important component in a change process is not an innovation itself, but the beliefs and practices of the people who are affected by it. The technology itself is a relatively minor component in the formula of technology use. The premise of Fulkerth's article is that since the 1980's, educators placed an undue amount of emphasis on technology itself, and overlooked the people who were expected to use it. As powerful technologies usher the information age into classrooms across the world, a host of new essential skills are emerging as priority competencies for students who are bound for the high-tech world of work.

Leu (1996) held the belief that multimedia environments will increase, not decrease the central role of teachers in orchestrating learning experiences. Educators will be challenged to thoughtfully guide students' learning within information environments that are richer and more complex than traditional print media, presenting richer and more complex learning opportunities for both teachers and students. In a recurrent pattern found in an U.S. federal research grant study on multimedia design and use in school classrooms, acknowledged that students often learn about complex multimedia environments by showing each other "cool" things. Leu said that it is imperative that educators direct students away from simulation and gaming software that is unrelated to the curriculum but rather, towards resources such as the World Wide Web (WWW) or CD-ROM software that are rich in information and multimedia.

Barron (1996) discussed several theories of learning suggesting that teachers tend to teach the way they were taught which was devoid of excitement and risk taking. The behaviorist's theory of learning, which became popular during World War II, met the problems of training masses of individuals with applications of behaviorism and military style discipline. This theory of learning was passed on to the schools, where the continued emphasis on external rewards and discipline promised positive scores on standardized tests. These tests represent the lowest level of learning and thus the theory worked at a superficial level of application. The behaviorist theory does not help the individual be a creative problem solver or a self-motivated learner. Barron pointed out that the constructivist theory provided the strongest support for information literacy: integration of the library media program into the curriculum, the use of library books instead of textbooks, the use of a wide range of information resources instead of simple drill and practice, and the need for an information specialist to work with the content specialist. Constructivists believe that the individual must be active in his or her learning,

bringing meaning to situations instead of being told the meaning by a teacher. Learners, according to constructivists, must search out data, analyze it, compare it to what they already know, and develop their own conclusions.

Holmes (1998) has designated the new 21st-century skills as the "Six C's": compute, communicate, conclude, confirm, categorize, and classify. In order for our children to be successful in the high-tech work force of the 21st-century, students must master certain skills that depend on prerequisite skills: the ability to evaluate critically, organize, synthesize, and manage the vast information resources that are now accessible through our emerging technology. Holmes claimed that teachers would accept the new literacy challenges and adopt technology as a teaching and learning tool, as long as practical ideas and projects that use technology for specific curricular objectives are presented clearly. In these instances, teachers are always eager to return to their classrooms to implement new ideas if their own hands on training reveals realistic and manageable ways in which students can learn new information in exciting and empowering new ways.

Wolcott (1996) underscored the importance of the teacher-librarian's roles in collaboration with other educators citing recent developments in education and technology including whole-language approaches, resource-based learning, and the proliferation of technology. Wolcott made several suggestions to become partners in developing curriculum and instruction and in utilizing and integrating technology. One suggestion involves changing perceptions, attitudes, and expectations relating to the role of the teacher-librarian. Another important point Wolcott emphasized was assuming responsibilities for instructional consultation by learning about ourselves and others, new and emerging technologies, and about the processes of teaching and learning. Understanding how teachers plan is critical for developing realistic

strategies that will facilitate learning and student achievement. Although often viewed as primarily a resource provider, the teacher-librarian should exercise the information specialist role by providing resources requested immediately and enthusiastically. By developing a rapport with teachers, the teacher-librarian can later become proactive and initiate an invitation to plan together in the future.

The Planned Solution Strategy

Integrating technology seamlessly into the curriculum can be a tremendous challenge, especially when students focus too much on the technology and not on their own learning (Silvas & Hall, 1997). They suggest a combination of multimedia use and cooperative group work that is completely tied to existing units as the key to success. To integrate technology into everyday student work, Silvas and Hall held teacher/student workshops where all teachers and students learned to use the same techniques. This teacher/student interaction created a comfortable working environment in which teachers learned from their students and from each other as well. The teachers learned to allow students to do some of the leading and teaching.

After careful analysis of a multitude of research on the integration of multimedia instructional technology, this writer supports the need for professional staff development as the key element in engaging teachers in the process of integrating technology into their instructions. As Moersch (1995) noted, the trainer must acknowledge the existing comfort and skill levels and build on that in order to effect change in the instructional process. This writer will implement "Technology Day"; a series of small group training sessions geared to the performance levels of the target group.

The goal for this program was to integrate technology as a tool by using it for research and writing, as well as to enhance work and presentations. As teachers develop their skills and expertise they will then transfer their knowledge to their students.

Since Solomon and Solomon (1995) identified on-site support as a critical element, this writer will visit each classroom once a week during the content instruction the teacher chooses. The writer, with the help of the technology representative, will offer immediate feedback and solve technical problems as they arise. Follow-up assistance will be provided on a one-on-one basis so individual needs can be addressed efficiently.

As recommended by Solomon and Solomon (1995), this writer will celebrate the small and large successes of teachers and students to motivate them to continue integrating technology. Student generated products will be displayed in the library media center. Teachers and students will be invited to discuss their accomplishments on the morning announcements through the school's closed circuit television system. This will draw the attention of the entire school population and will stimulate inquiry by other teachers at other grade levels.

These solution strategies will raise the comfort level and skills of teachers in the target group. Strengthened with confidence in themselves and the knowledge that the computer is an effective teaching strategy, these teachers will integrate technology across the curriculum. Students will log onto the computers and interact with the software programs available at the school to complete multimedia projects.

Chapter III

Method

Resources

Multimedia Technology encompasses many things and can be used in many ways---audio/video productions, telecommunications, CD-ROM and videodiscs, databases, desktop publishing, integrated learning systems, etc. Technology easily accommodates different learning styles as well as, teaching styles.

After careful analysis and discussions with the school's technology representative, the writer in collaboration with the technology representative implemented a series of staff development training sessions using multimedia technology known as "Technology Day". Two days a week, the targeted group was scheduled during their one-hour grade level planning period to go to the library or to meet the writer in their classrooms for inservice training in using technological hardware and software available at the school site.

The writer implemented the solution strategies twice a week for 12 weeks. The tasks focused on raising the comfort level and skills of the teachers by providing staff development and one-on-one support. The instructional environment for all activities was divided between the school's library media center and a classroom. Instruction was threefold: whole group, working with a partner and individual.

After the proposal was written, the writer attended an in-service training workshop given by Franz Pierre, where he addressed the levels of knowledge and the areas of interest of his students. Pierre instructs his workshops at the Informational level where the user has a novice level of knowledge and skills in using IT. At this particular workshop Pierre demonstrated how to use Microsoft's PowerPoint Presentation software. After modeling the basic steps to create an original presentation in a whole group environment, Pierre distributed Task Cards (Appendix G)

to guide the group in the creation of a PowerPoint presentation. These Task Cards were so simple to follow that the writer of this project decided to use these same Task Cards to facilitate the targeted group's production of a PowerPoint presentation.

The writer sought the assistance of colleagues with more expertise in certain skills being targeted in the implementation plan. For example, one of the third grade teachers who had already been using Microsoft Works Database to create an electronic grade book agreed to assist in teaching that skill. The music teacher was very knowledgeable in using the Internet as well as, sending and receiving e-mail. So his help was obtained to teach those skills. The technology representative was very instrumental in the overall success of the staff development training sessions as well as, motivating the teachers to participate.

Implementation

The following activities were conducted within the implementation period of this report:

Week One

The focus of this week was instructing the teachers on a software program called Worksheet Magic. This program allows teachers to create a variety of worksheets containing spelling words or specific subject-related words. The training was held on Technology Day during the target group's common planning time. The writer reviewed the manual and handed out step-by-step directions of how to use the software. The writer then demonstrated the Worksheet Magic software for the target group. The targeted group worked in pairs entering text on the computer to create different worksheets.

At the second session, the targeted group was asked to bring their spelling words or content-related words to the library media center. The writer assisted each teacher individually to

create various worksheets using specific words related to their curriculum and students' levels. The worksheets were printed out and made available for the teachers to take with them.

Week Two

The focus of this week was to introduce the teachers to Microsoft Works Word Processor. During the first session, the writer introduced the software program and distributed basic directions on how to use Microsoft Works. The writer demonstrated how to produce a word processor document by typing in the word processor, changing fonts, font sizes, font styles, highlighting to make changes, naming and saving a document and using the toolbar. During the last fifteen minutes of the session, the teachers practiced creating a word processor document. Afterwards, the targeted group saved their document onto a floppy. The teachers in the targeted group were required to print their final product.

During the second session, the writer visited each teacher in the target group's classroom providing individual assistance in changing fonts, font sizes, font styles, naming and saving a document, using the toolbar, and addressed any technological concerns. The teachers in the targeted group created a document on the word processor, saved their work onto a floppy disk and then printed their final product.

Week Three

The focus of week three was to expand on the capabilities of Microsoft Works Word Processor. The writer demonstrated how to:

1. open a new or existing document
2. copy and move information using the copy, cut and paste commands
3. create bulleted lists and other lists with tabs setting alignment to visually organize paragraphs

4. set line and paragraph spacing

5. add an object such as a picture or WordArt to a document.

Afterwards, the writer distributed floppy disks and a list of tasks giving step-by-step directions on how to proceed on the word processor. The last fifteen minutes of the session was dedicated to allowing the teachers to practice their skills by completing as many of the tasks as they were able to.

During the second session, the writer, visited each teacher in the target group's classroom and provided individual assistance as well as, addressed any technological concerns. The teachers incorporated their skills to create a word processor document and afterwards, print and save it onto a floppy disk. Based on their skills, the teachers in the targeted group were asked to produce a document that was usable in their classroom.

Week Four

At this point, the teachers requested training on how to establish an electronic grade book using Microsoft Works Database software program. So the focus of this week was changed to meet the needs of the trainees. The writer created user groups. With the assistance of the technology representative and the third grade teacher who was already using this system for recording grades, the targeted group was walked through the process of establishing a grade book on the computer. After the demonstration, the writer distributed step-by-step directions to the target group. During the remainder of the session the targeted group began a grade-book sheet by entering the names of their students and their grades. The teachers saved their work onto a floppy disk and took it with them.

During the second session of the week, the writer organized user groups that visited each teacher in the target group's classroom and provided individual assistance and on-site support. The

writer and the technology representative confronted all technical difficulties the target group was experiencing in the classroom. The teachers were asked to complete their grade-book sheet, save their document onto a floppy disk and print it. However, at the time of printing, some teachers experienced problems with their printers and so were unable to print out their documents. The documents were saved in the computer until the technical problems could be remedied.

Week Five

The focus of this week was to demonstrate how to connect and use the Liquid Crystal Display (LCD) projector to conduct a whole group instructional activity. The writer demonstrated to the target group how to connect the LCD projector to a computer. The writer explained the usefulness of projecting an enlarged image to teach a computer skill to their students using whole-group instruction. The writer demonstrated how to use the remote control device to change the settings on the LCD projector. After the demonstration, the teachers practiced hands-on connecting and disconnecting the LCD projector to the computer, and using the remote control device on the LCD projector. The teachers in the target group were required to successfully connect and disconnect the LCD projector to a computer.

During the second session, the writer visited each teacher in the targeted group's classroom and conducted a lesson with the collaboration of the teacher on how to use the word processor to type a report. The lesson was demonstrated to the students using the LCD projector that the teacher had successfully connected to a computer. The teacher gave the students an assignment that required them to use Microsoft Works words processor.

Week Six

The focus of this week was to teach the target group a presentation component of Microsoft Office called PowerPoint. The writer explained the various aspects of PowerPoint and

then demonstrated how to begin a presentation on PowerPoint. After the demonstration, the teachers received Task Cards created by Franz Pierre that gave step-by-step directions on the basics of PowerPoint.

During the last thirty minutes of the session, the teachers practiced using the PowerPoint software and created a two or three slide presentation.

The second session was dedicated to providing individual instruction to each teacher in the targeted group to help them create a PowerPoint presentation on a topic or theme of their choice.

Week Seven

The focus of this week was to teach the target group how to enhance their PowerPoint presentation. The writer demonstrated how to:

1. format the background
2. insert clip art or pictures
3. insert sounds and moving clips from the gallery
4. insert a hyperlink
5. add animation

The last 30 minutes of the session allowed for the teachers to practice adding these enhancements to their PowerPoint presentation. The writer answered questions as they arose and assisted as needed.

During the second session, the targeted group returned to the library media center to complete their PowerPoint presentations. The writer provided on-site support and assist as needed. The teachers in the targeted group were required to create and produce a minimum three-slide presentation containing sounds, clipart, and a formatted background.

Week Eight

At the request of the principal, the focus of this week was changed to instruct the teachers how to use The Accelerated Reader program mandated by the district. An informational packet was distributed and a brief overview of The Accelerated Reader program was explained. The targeted group was assigned to a computer where they were required to sign in as a student, take a test on a book they had previously read and finally, observe and print their results. This process gave the teachers a basic understanding of the steps a child goes through to become successful when using The Accelerated Reader program on the computer. Later, the targeted group signed in again as a teacher and printed various reports accessible to teachers to summarize and analyze student's reading comprehension and test data.

During the second session, the writer with the assistance of the technology representative went to the teacher's classroom to model the steps the student would take to complete a test using the Accelerated Reader program. The classroom teacher was required to connect the LCD projector to the computer containing the Accelerated Reader program. The classroom teacher worked the LCD projector as the writer and the technology representative explained the process to the students.

Week Nine

The focus of this week was to instruct the teachers in the targeted group how to locate and retrieve information using CD-ROM electronic encyclopedias. The writer demonstrated how to use Compton's Interactive Encyclopedia on CD-ROM. The writer explained the following features:

- The tableau screen and viewers
- The path buttons

- The path viewer
- The multimedia viewer
- The article viewer

The targeted group was given step-by-step directions on how to access and locate information on the CD-ROM electronic encyclopedia. The last fifteen minutes of the session allowed the teachers in the targeted group to practice using the computer to access and locate information on CD-ROM.

During the second session of the week, the targeted group returned to the library media center to access and locate specific information related to a lesson plan or thematic unit of their choice. The writer demonstrated how to:

- Print text
- Use outline to see a list of the article contents
- Create a bookmark at the current section of an article to be able to return to it easily
- Change the size of the text in articles.

The teachers worked in pairs using the CD-ROM electronic encyclopedia to locate and retrieve information. The teachers in the target group were asked to create a bookmark, change the size of the text in an article and finally print the text. The writer assisted and answered questions as needed.

Week 10

The focus of this week was to expose the teachers in the target group to the World Wide Web (WWW) or the Internet. The writer, with the assistance of the music teacher, gave an overview of what is the Internet. The targeted group was explained the benefits of using the Internet for teachers and students. The target group was given an Internet packet explaining

helpful terms associated with the Internet, various search engines and some web sites. After modeling the steps, the targeted group had to:

- Obtain access to the Internet by using the Internet Explorer.
- Locate the Miami-Dade County Home Page.
- Locate the school's website.
- Access various search engines and specific web sites related to the different subject areas.

The teachers in the targeted group were given a list of WWW sites containing valuable resources to the different subject areas. The last part of the session allowed the teachers in the targeted group to practice accessing the Internet and locating various sites on the WWW.

The second session of the week was left optional to the targeted group. The teachers in the targeted group were asked to practice accessing the Internet through the computer in their classrooms, at home, or in the Technology Representative's classroom.

Week 11

The focus for this week was to introduce electronic mail, or e-mail, and discuss how it is used to send messages and files from one person to another. The writer, with the assistance of the music teacher, discussed basic e-mail concepts and then demonstrated how to use POP mail.

The last part of the session allowed the teachers in the target group to practice accessing the Internet, addressing e-mail and sending e-mail.

During the second session of the week, teachers in the targeted group brought an e-mail address of their choice to practice retrieving and sending e-mail. The writer was available to assist and answer questions as the need arose.

Week 12

The focus of this week was to introduce a service called mailing lists and Newsgroups. The writer explained mailing lists and demonstrated how to join a mailing list or Newsgroup. The writer supplied the target group with a list of e-mail addresses of various mailing lists and Newsgroups.

During the last part of this session, the target group attempted to join mailing lists or Newsgroups. The writer was available to answer questions and assist as the need arose.

During the second session of the week, the writer discussed proper etiquette and basic rules that should be followed when using the Internet and e-mail. The writer provided a list of the basic rules for using the Internet to the target group. This session was a question and answer session to assist teachers in the targeted group with any difficulties or questions that arose when using technology in their instructions.

The targeted group was given The Teacher Technology Survey and asked to complete it before the end of the session. The writer collected the surveys and the teachers' technology portfolios. The results were recorded and documented.

Difficulties and Modifications

As a result of extenuating circumstances over which the writer had very little control, the ability to carry out this practicum program within the specified 12 week time parameters was not possible. During the 12-week period in which the writer implemented the described solution strategies, various school functions impeded implementation. During the month of December, the in-service workshops scheduled during the week December 14-18, 1999 had to be canceled due to Holiday presentations and other celebrations. In February, the scheduled workshops had to be postponed at the request of the teachers in order for them to better prepare their students for

the upcoming March Stanford Achievement Tests. The workshops were resumed the week of March 15, 1999.

At other times, the teachers would arrive later than their scheduled times to the in-service training. As a result, the training was often cut short, the training was rushed, allowing for very little or no practice time to occur.

The writer noticed a general resistance to these staff development workshops by the teachers. Moreover, one of the sixth grade teachers displayed an apathetic attitude toward the workshops and would not attend. To remedy this lack of interest, the technology representative was able to obtain funds to buy food and drinks for the staff development workshops.

Another major problem encountered was the fact that although the IBM Eduquest computer network was installed just five years ago, the system hardware, peripherals such as printers, and some software programs have become obsolete and have started malfunctioning. Thus, technical difficulties impeded the teacher's ability to infuse technology into their curriculum. On-site support must be made available when teachers experience technological breakdowns.

Finally, at the onset of the practicum program one of the third grade teachers left the school. Another third grade teacher went on maternity leave. Her replacement had to leave after a month and the second substitute never attended the workshops.

Chapter IV

Results

The aim of this chapter is to assess the results against the criteria by accounting for each objective. The intended outcome of this practicum was to increase the use of multimedia instructional technology into the curriculum. The participants were 14 teachers in the third, fifth, and sixth grade working at a public elementary school in the southeastern region of the United States. The study was conducted during the winter semester of the 1998-1999 school year.

As mentioned in the Outcome Objective Chapter, the writer addressed the teachers' accessibility to multimedia technology, training and on-site support. To do this, the writer conducted staff development sessions and created User Groups to support the teachers.

The effort to increase the use of multimedia instructional technology into the curriculum would be accomplished if the following objectives were met:

1. Following participation in a 12 week practicum project using technology, the teachers in the target group will demonstrate increased use of instructional technology by generating products using four out of eight skills in which they have been instructed as evidenced by a technology portfolio checklist.

2. Following participation in a 12 week practicum project using technology, the target group will gain at least 20% more skills to operate and integrate various technological hardware and software programs as evidenced by a teacher technology survey.

The first objective, increased use of instructional technology, was evaluated by generated products using four out of eight skills in which the targeted group had been instructed as evidenced by a technology portfolio checklist (Appendix C). Success was attained when 70% or more of the targeted teachers generated documents using four out of the eight skills in which

they were instructed. A technology portfolio checklist was kept throughout the implementation phase of this practicum. During the implementation period, the teachers received instruction to enhance the use of multimedia instructional technology into their curriculum. The eight skills taught included using Worksheet Magic Software to create 15 different worksheets, accessing, locating and retrieving information from the CD-ROM electronic encyclopedias, creating and producing a word processor document using Microsoft Works, create a slide presentation using PowerPoint software, browse and retrieve information using the Internet, send and retrieve e-mail messages, print students' reading reports from the Accelerated Reader Software Program and creating an electronic grade book using Microsoft Works database. The Technology Portfolio Checklist Results (Appendix D) show that 50% of the teachers used this software program. In addition, 70% of the teachers were able to locate and retrieve information from the CD-ROM electronic encyclopedia. Ninety percent of the teachers were able to produce a word processor document using Microsoft Works. Twenty percent of the teachers were able to create a simple slide presentation using the PowerPoint software. Ninety percent of the teachers were able to browse and retrieve information using the Internet. Sixty percent of the teachers were able to send and retrieve e-mail messages. Seventy percent of the teachers were able to print student-reading reports using The Accelerated Reader program, and 10% of the teachers were able to create an electronic grade book. These skills enabled teachers to generate documents using multimedia technology thus enhancing their teaching repertoire.

The second objective, the attainment of at least 20% of the targeted group acquired more skills to operate and integrate various hardware and software programs was evaluated according to the responses by the targeted group on the teacher-made Pre and Post Teacher Technology Survey (Appendix E) Success was attained when 20% or more of the targeted teachers increased

the ability to use 15 of the 26 skills surveyed based upon a comparison of their individual pre and post survey scores. The pre-survey was administered at the onset of this project. When the targeted group was pre-surveyed, results indicated that over 50% of the targeted group exhibited a lack of knowledge in 12 of the 26 skills surveyed to operate and integrate multimedia instructional technology into their curriculum. Furthermore, 53% of the targeted group said they did not integrate multimedia instructional technology into their curriculum. During the implementation period the targeted teachers received instruction to enhance skills in using technological hardware and software. The activities used included using technology as a tool for research and writing, as well as to enhance work and presentations. The post-survey (Appendix٢) was administered during the last week of implementation. The results of the post-survey indicated that 50% or more of the targeted group was unable to perform only eight of the 26 skills surveyed. Moreover, 86% of the targeted group said they did integrate multimedia instructional technology into their curriculum as compared to 47% of the targeted group pre-surveyed who said they used multimedia instructional technology. This shows an increase of 39% more teachers now infusing technology into their curriculum.

These strategies raised the comfort level and skills of the teachers in the targeted group. As teachers developed their skills and expertise they then transferred their knowledge to their students. Understanding that the computer is an affective teaching strategy, the targeted teachers integrated technology across the curriculum. Thus, their students were encouraged to log onto the computers and interact with the software programs available at the school to complete multimedia projects.

Chapter V

Recommendations

The successful completion of the objectives of this program was shared with the teachers and administrators of the targeted school during the monthly grade level meetings. The faculty and administration were impressed with the increased infusion of multimedia instructional technology into the curriculum. The principal indicated that she wanted to see more project-based learning through the infusion of technology experiences for the students in the upcoming school year.

The writer, with the support of the technology representative, recommended that learning projects be designed so that the teachers would have an immediate use for the technology as well as see how the technology would work in their classroom. Furthermore, it was recommended that more staff development opportunities be made available since the key to ensuring effective use of instructional technology is professional development. In-service training should be done in small groups and with a practical approach. As long as practical ideas and projects that use technology for specific curricular objectives are presented clearly, teachers will adopt technology as a teaching and learning tool. Another suggestion was to provide more on-site support for the staff because people learning to use new tools require a supportive environment.

Additionally, student generated products were displayed in the school's library media center. Teachers and students were invited to discuss their successes on the morning announcements through the closed circuit television system.

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Appendix A

Teacher Technology Survey

Appendix A

TEACHER TECHNOLOGY SKILLS PRE-SURVEY

Name: _____ Grade: _____ Date: _____

Please fill out this survey by placing an X in the appropriate box using the scale below.

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Multimedia Technology Skills	1	2	3	4	5
I am able to access a network.	2	1	4	5	3
I am able to access windows.	3	2	1	4	5
I am able to use a word processor.	1	3	2	4	5
I am able to use the computer to access information.	2	0	4	3	7
I am able to use a mouse to complete a task on the computer.	2	0	3	1	9
I am able to access school view.	2	2	3	2	6
I am able to access Children's Writing & Publishing (CW&P).	2	3	3	1	6
Using CW&P, I am able to import pictures.	3	4	3	1	4
Using CW&P, I am able to change fonts.	2	3	1	1	8
Using CW&P I am able to design page layouts.	3	4	2	1	5
I am able to access Microsoft Works (MSW).	3	5	1	1	5
Using MSW, I am able to use a spreadsheet.	3	6	2	1	3
Using MSW, I am able to create documents.	3	5	0	2	5
Using MSW, I am able to use the database.	3	5	4	1	2
I am able to use the printer.	2	2	0	3	8
I am able to save my document onto a floppy disk.	2	1	4	5	8
I am able to create a PowerPoint presentation	3	8	2	1	1
I am able to use an overhead projector.	2	1	0	5	7
I am able to use a LCD projector.	2	5	4	0	4
I am able to use scanner.	3	6	3	1	2
I am able to use a laser disc player.	2	5	3	2	3
I am able to use a CD-ROM.	2	4	1	5	8
I am able to access the Internet.	3	3	1	2	6
I am able to use e-mail.	2	3	1	3	6
I am able to use a digital camera.	3	6	3	0	3
I am able to use a video recorder.	2	2	3	1	7

Classroom Environment	1	2	3	4	5
I integrate multimedia instructional technology into my curriculum.	3	2	3	2	5
I use a learning centers approach in my classroom.	1	2	5	2	5
I use thematic units to integrate my curriculum.	1	0	3	6	5
My students are able to get help from peers and classroom resources.	1	0	0	6	8
I am able to provide for a variety of learning styles in my classroom.	1	0	1	2	11
I use the Library Media Center's materials and resources in my curriculum.	0	1	2	6	6

Appendix B

Teacher Technology Survey

Appendix B

TEACHER TECHNOLOGY SKILLS PRE-SURVEY

RESULTS IN PERCENTAGES

Multimedia Technology Skills	CAN DO	CAN'T DO
	%	%
I am able to access a network.	53	47
I am able to access windows.	60	40
I am able to use a word processor.	60	40
I am able to use the computer to access information.	67	40
I am able to use a mouse to complete a task on the computer.	67	33
I am able to access school view.	53	47
I am able to access Children's Writing & Publishing (CW&P).	47	53
Using CW&P, I am able to import pictures.	33	67
Using CW&P, I am able to change fonts.	60	40
Using CW&P I am able to design page layouts.	40	60
I am able to access Microsoft Works (MSW).	40	60
Using MSW, I am able to use a spreadsheet.	27	73
Using MSW, I am able to create documents.	47	53
Using MSW, I am able to use the database.	20	80
I am able to use the printer.	73	27
I am able to save my document onto a floppy disk.	53	47
I am able to create a PowerPoint presentation	13	87
I am able to use an overhead projector.	80	27
I am able to use a LCD projector.	27	73
I am able to use scanner.	20	80
I am able to use a laser disc player.	33	67
I am able to use a CD-ROM.	53	47
I am able to access the Internet.	53	47
I am able to use e-mail.	60	40
I am able to use a digital camera.	20	80
I am able to use a video recorder.	60	47

Classroom Environment	YES	NO
	%	%
I integrate multimedia instructional technology into my curriculum.	47	53
I use a learning centers approach in my classroom.	47	53
I use thematic units to integrate my curriculum.	73	27
My students are able to get help from peers and classroom resources.	93	6
I am able to provide for a variety of learning styles in my classroom.	87	13
I use the Library Media Center's materials and resources in my curriculum.	80	20

Appendix C

Technology Portfolio Checklist

Appendix C

Technology Portfolio Checklist

Name: _____ Date: _____

Directions: Circle yes or no if you understand and have used the following technology.

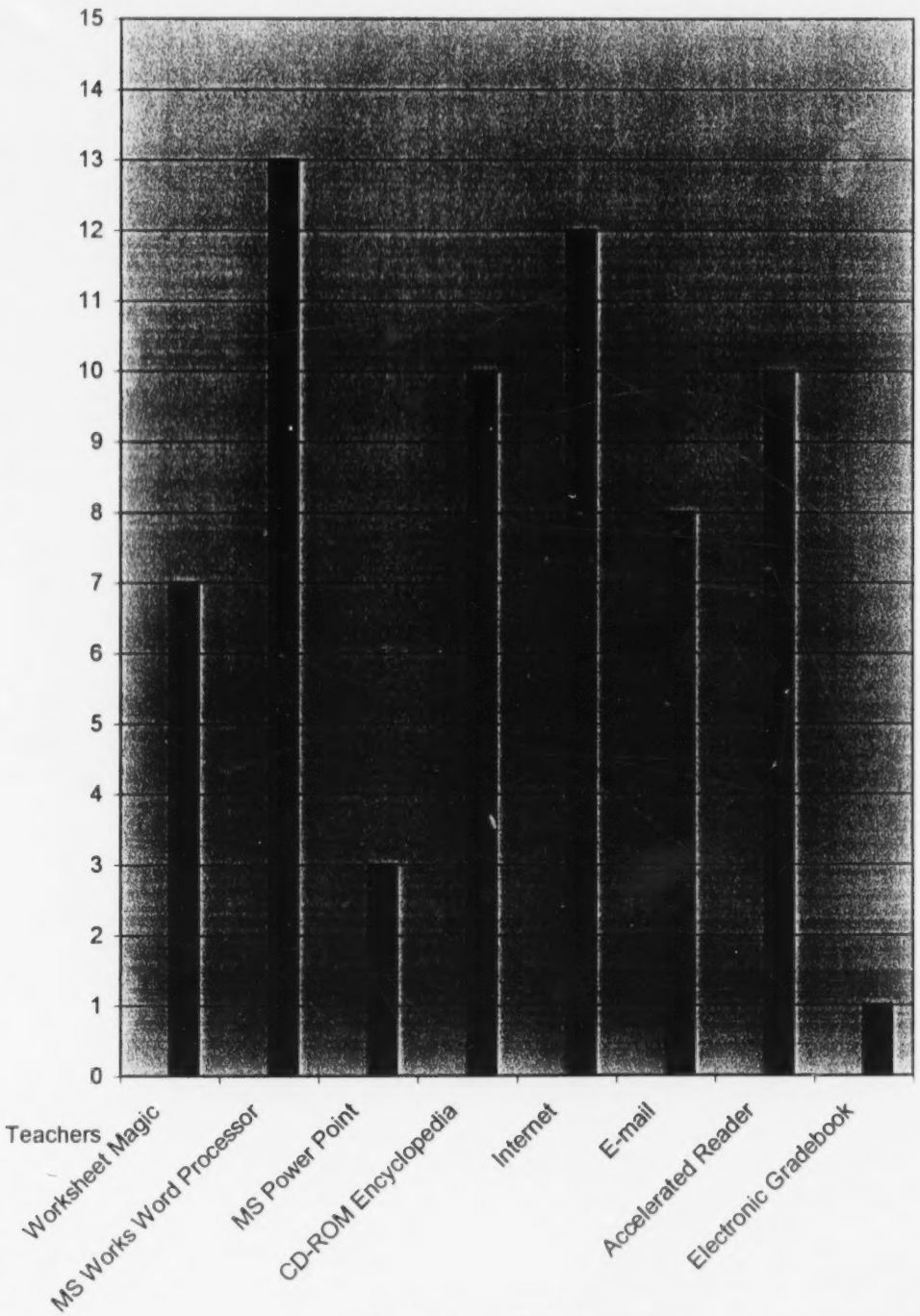
1.	Have used Worksheet Magic to create activity sheets.	YES	NO
2.	Have used Microsoft Works Word Processor to create documents.	YES	NO
3.	Have created a Microsoft PowerPoint Presentation.	YES	NO
4.	Have retrieved information using CD-ROM electronic encyclopedia.	YES	NO
5.	Have browsed/retrieved information using the Internet.	YES	NO
6.	Have sent/received e-mail messages.	YES	NO
7.	Have printed reports from the Accelerated Reader Software Program.	YES	NO
8.	Have used Microsoft Works database to create an electronic grade book.	YES	NO

Appendix D

Technology Portfolio Checklist Results

Appendix D

Technology Portfolio Checklist Results



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Appendix E

Teacher Technology Skills Post-Survey

Appendix E

TEACHER TECHNOLOGY SKILLS POST-SURVEY

Name: _____ Grade: _____ Date: _____

Please fill out this survey by placing an X in the appropriate box using the scale below.

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Multimedia Technology Skills	**1**	**2**	**3**	**4**	**5**
	0	1	2	8	3
I am able to access a network.	0	1	0	8	5
I am able to access windows.	0	1	0	8	5
I am able to use a word processor.	0	1	3	3	7
I am able to use the computer to access information.	0	0	0	5	9
I am able to use a mouse to complete a task on the computer.	0	0	4	4	6
I am able to access school view.	0	1	2	5	6
I am able to access Children's Writing & Publishing (CW&P).	0	2	5	3	4
Using CW&P, I am able to import pictures.	0	1	0	5	8
Using CW&P, I am able to change fonts.	1	3	4	1	5
Using CW&P I am able to design page layouts.	0	1	0	8	5
I am able to access Microsoft Works (MSW).	1	6	4	0	3
Using MSW, I am able to use a spreadsheet.	0	1	0	8	5
Using MSW, I am able to create documents.	0	1	7	4	2
Using MSW, I am able to use the database.	0	0	1	5	8
I am able to use the printer.	0	1	0	9	4
I am able to save my document onto a floppy disk.	0	5	4	4	1
I am able to create a PowerPoint presentation	0	0	1	6	7
I am able to use an overhead projector.	0	1	4	5	4
I am able to use a LCD projector.	2	6	3	1	2
I am able to use scanner.	2	6	3	1	2
I am able to use a laser disc player.	1	5	4	1	3
I am able to use a CD-ROM.	0	2	1	8	3
I am able to access the Internet.	0	0	0	9	5
I am able to use e-mail.	0	0	0	8	6
I am able to use a digital camera.	2	6	2	0	4
I am able to use a video recorder.	0	5	1	2	7

Classroom Environment	1	2	3	4	5
I integrate multimedia instructional technology into my curriculum.	0	0	2	7	5
I use a learning centers approach in my classroom.	0	0	8	1	5
I use thematic units to integrate my curriculum.	1	0	2	6	5
My students are able to get help from peers and classroom resources.	0	0	1	7	6
I am able to provide for a variety of learning styles in my classroom.	0	0	1	4	9
I use the Library Media Center's materials and resources in my curriculum.	0	0	1	9	4

Appendix F

Teacher Technology Skills Post-Survey Results

Appendix F

TEACHER TECHNOLOGY SKILLS POST-SURVEY

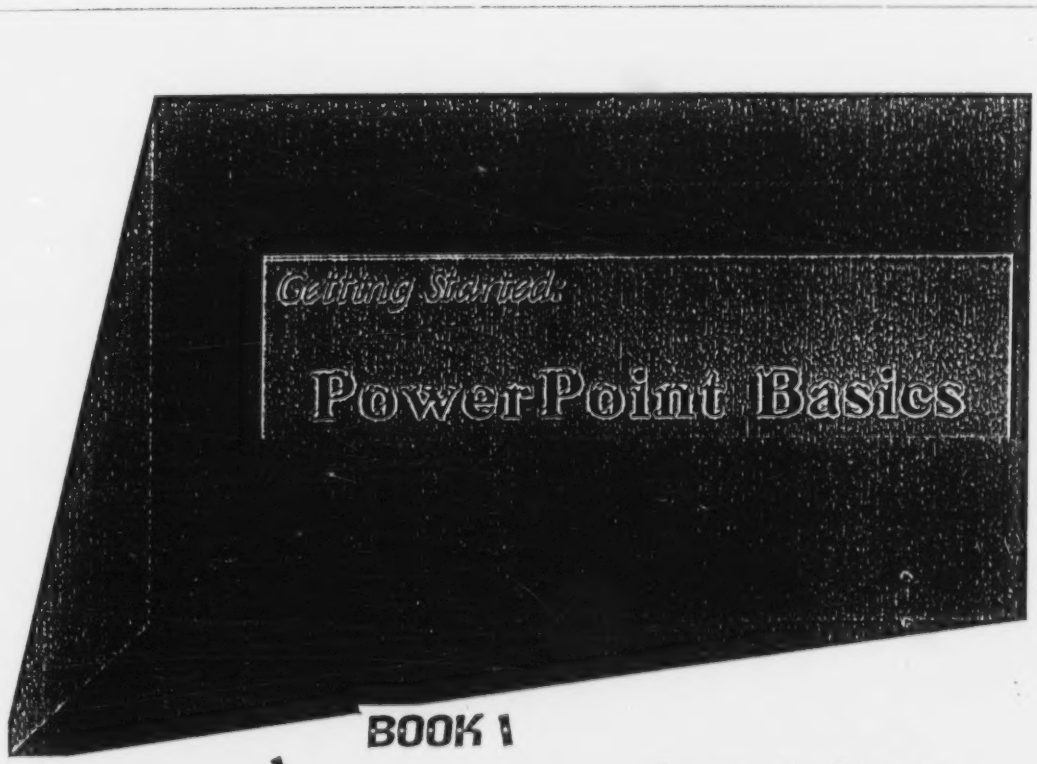
RESULTS IN PERCENTAGES

Multimedia Technology Skills	CAN DO	CAN'T DO
	%	%
I am able to access a network.	79	22
I am able to access windows.	93	9
I am able to use a word processor.	93	9
I am able to use the computer to access information.	72	29
I am able to use a mouse to complete a task on the computer.	100	0
I am able to access school view.	72	29
I am able to access Children's Writing & Publishing (CW&P).	79	22
Using CW&P, I am able to import pictures.	50	50
Using CW&P, I am able to change fonts.	93	9
Using CW&P I am able to design page layouts.	43	58
I am able to access Microsoft Works (MSW).	93	9
Using MSW, I am able to use a spreadsheet.	22	79
Using MSW, I am able to create documents.	93	9
Using MSW, I am able to use the database.	43	58
I am able to use the printer.	93	9
I am able to save my document onto a floppy disk.	93	9
I am able to create a PowerPoint presentation	36	65
I am able to use an overhead projector.	93	9
I am able to use a LCD projector.	65	36
I am able to use scanner.	22	79
I am able to use a laser disc player.	29	72
I am able to use a CD-ROM.	79	22
I am able to access the Internet.	100	0
I am able to use e-mail.	100	0
I am able to use a digital camera.	29	72
I am able to use a video recorder.	65	43

Classroom Environment	YES	NO
	%	%
I integrate multimedia instructional technology into my curriculum.	86	15
I use a learning centers approach in my classroom.	43	58
I use thematic units to integrate my curriculum.	79	22
My students are able to get help from peers and classroom resources.	93	9
I am able to provide for a variety of learning styles in my classroom.	93	9
I use the Library Media Center's materials and resources in my curriculum.	93	9

Appendix G

Power Point Basics



BOOK 1

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About PowerPoint

- PowerPoint is the presentation component of Microsoft Office that lets you create and save presentations.

- PowerPoint slides may include text, drawings, charts, outlines, sounds, and/or graphics.

- A presentation is a collection of slides relating to the same topic. These slides can be shown along with a narration to instruct and or to elaborate about the highlights/key teaching points of said presentation. You may also use PowerPoint as a self-standing instructional/ assessment tool. From the presentation, you can prepare handouts for your class, classroom notes for students, and outlines to provide an overview of the lesson. In addition, you can use slides to make overhead transparencies. You can also create 35 mm slides of your presentation.

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TaskCard # 1: *Starting PowerPoint*

1. Start the Computer Workstation if you have not done so already.

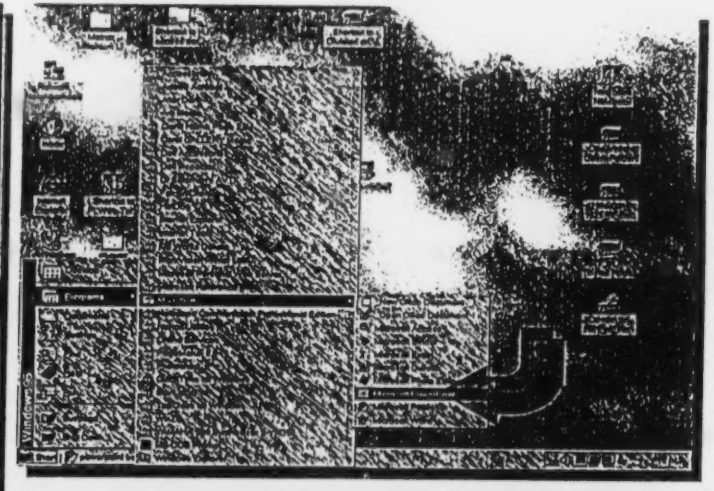
2. *CLICK START* on the Windows '95 Task-bar.

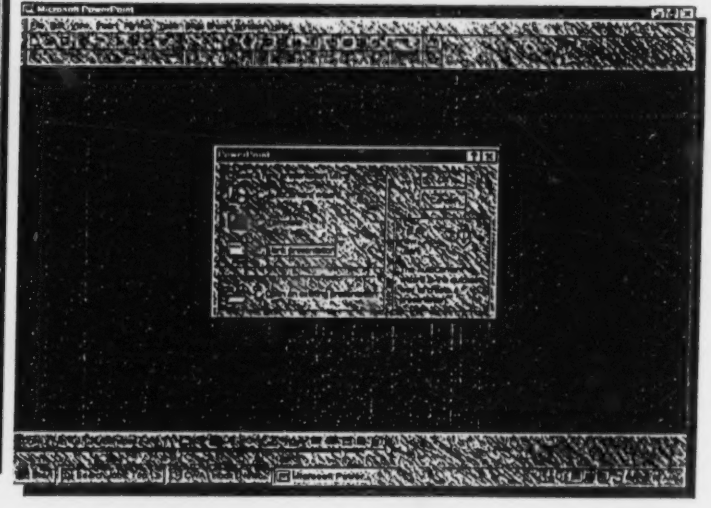
3. *SCROLL* to *PROGRAMS*, then to *MS OFFICE*. *SCROLL* over to the *MICROSOFT POWERPOINT* icon. *CLICK* or let go of the mouse button.

4. A window like the one on the right side of this page indicates that you have successfully started PowerPoint.

Select *BLANK PRESENTATION and CLICK OK.*

GO TO THE NEXT PAGE





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5. Select the slide *TITLE SLIDE* if it is not already selected.

6. *CLICK* on the selected icon *TITLE SLIDE.*

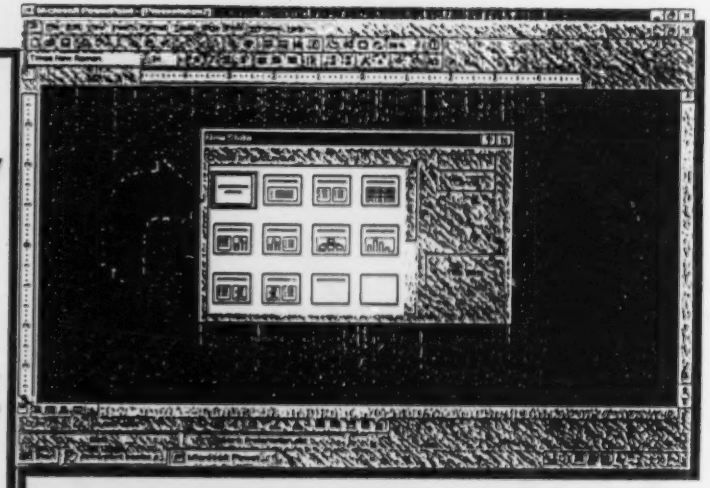
7. *CLICK* in the dialog box *CLICK TO ADD TITLE.* Choose a *FONT* and a size (36 to 44) Type the Following item:

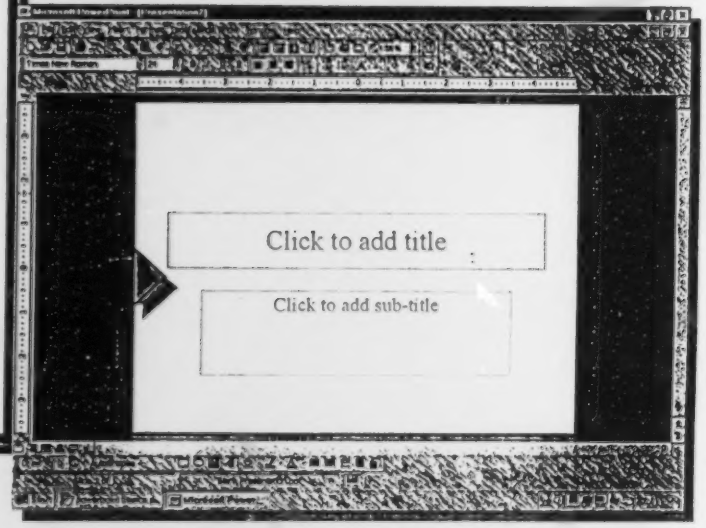
MY First Presentation

8. In the dialog box *CLICK TO ADD SUBTITLE,* type the following item:

Welcome to Miami-Dade County Public Schools

GO TO THE NEXT PAGE





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9. On the *Menu Bar*, *CLICK* on *INSERT*.

10. *SCROLL* down to *NEW SLIDE*.

11. Once it is highlighted (selected), *CLICK* or let go of the mouse button.

12. Select the slide layout to the right of the *TITLE SLIDE* icon.

13. *CLICK OK*.

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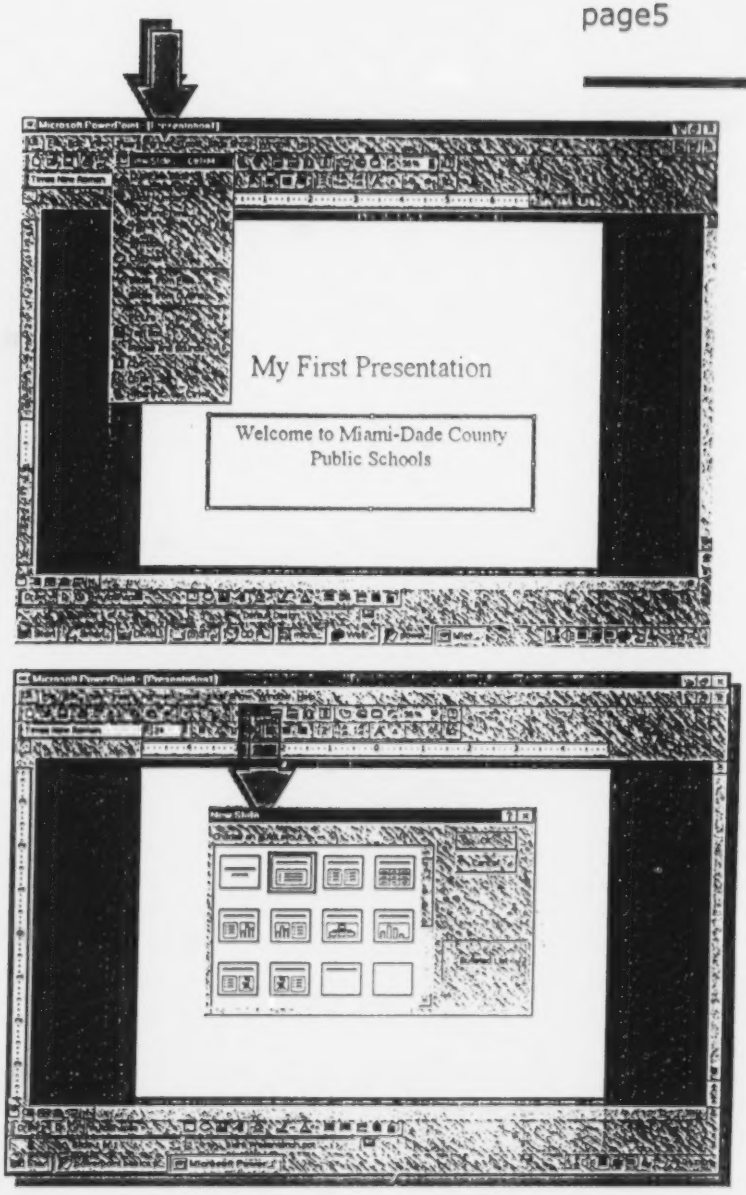

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14. In the *CLICK* to *ADD TITLE* text box. Type the following item:

The First Day

15. *CLICK* in the *CLICK to ADD TEXT* text box. Type the following items:

- Introduction
- *Class Rules*
- *Supplies & Materials*
- *Schedules*

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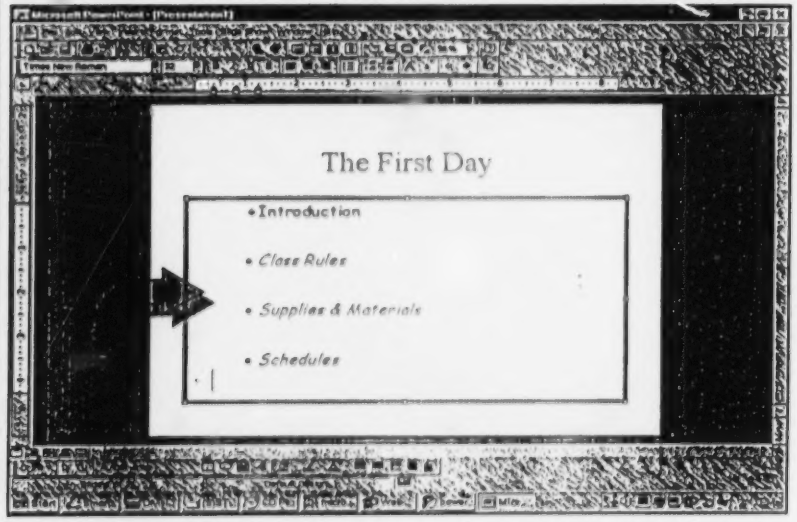

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16. *CLICK FILE* on the *MENU BAR.*

17. *SCROLL* down to *SAVE AS ...*

18. Once selected (or highlighted) *CLICK* or let go of the mouse button.

19. Use the arrow in the *SAVE IN* dialog box to select *DRIVE 3 1/2 FLOPPY. CLICK* on the *3 1/2 FLOPPY* icon . The *3 1/2 FLOPPY DISKETTE* icon should be in the *SAVE IN* dialog box.

20. Click inside the *FILE NAME* dialog box. Type *MY FIRST PRESENTATION.*

21. *CLICK* on *SAVE.*

CONGRATULATIONS !

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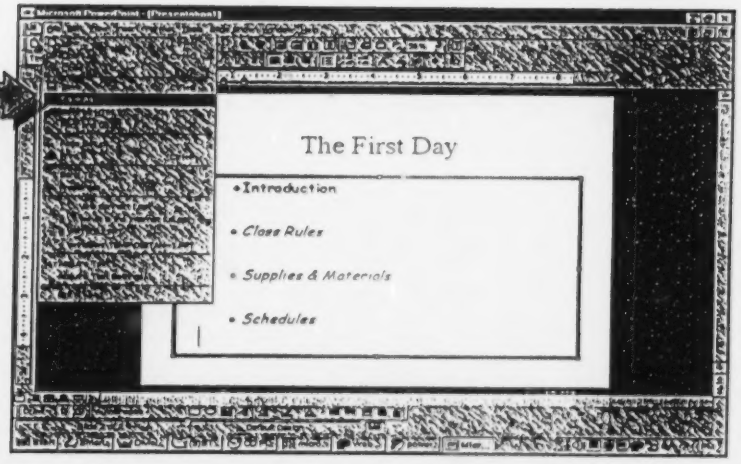

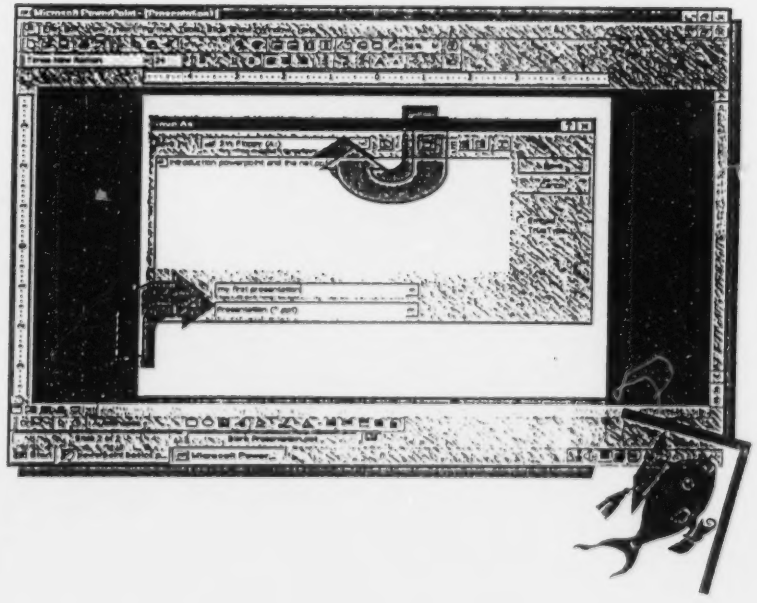

TaskCard # 2 : *Playing Your Slide Show*

1. Use the **Scroll Bar** on the right to return to the first slide.

2. Click on the **SLIDE SHOW** icon located at the bottom left-hand corner of your PowerPoint window. The slides will start playing. Advance to the next slide by clicking on the mouse button.

Or

3. Select and click on **SLIDE SHOW**. Scroll down to **VIEW SHOW**. Let go of the mouse. The slides will start playing. Advance to the next slide by clicking on the mouse button.

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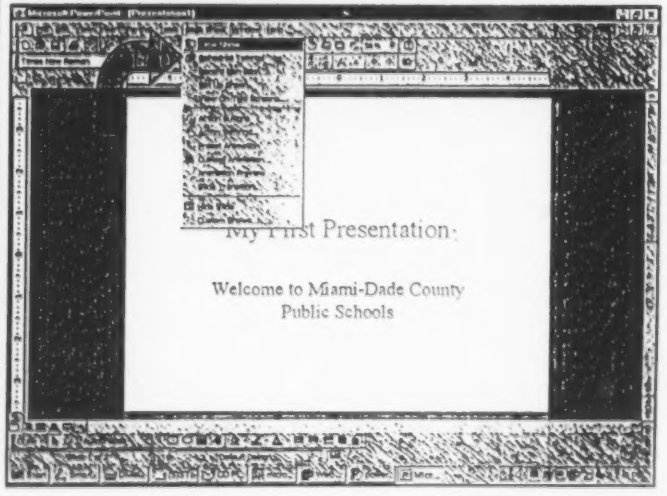

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4. You should be looking at the first slide.

5. Click the mouse button again. You should be looking at slide # 2.

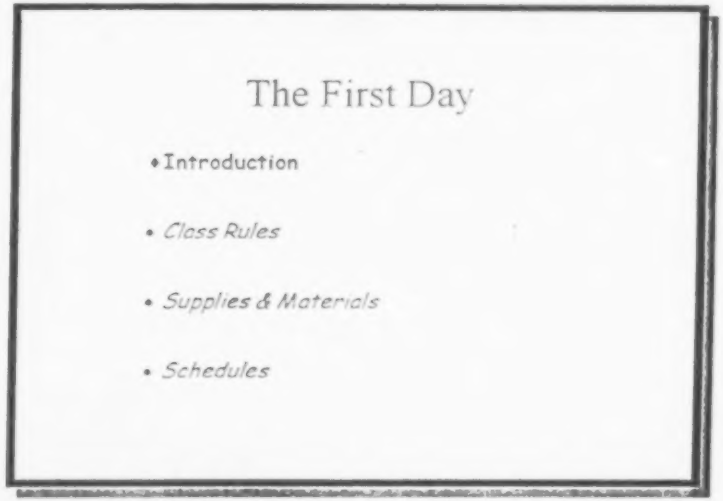
6. Select and hit the **ESC** button on the key-board. This should bring you back to the PowerPoint window.

7. Select and click on **FILE**. Scroll to **CLOSE**. Let go of the mouse button or click.

8. To go back to your presentation, select and click on **FILE**, scroll down to **OPEN**. Select existing presentation.

9. Make sure you select the correct location of the file **My First Presentation**- in this case the 31/2 floppy. Select the file and click **OK** or **OPEN**.

Congratulations !



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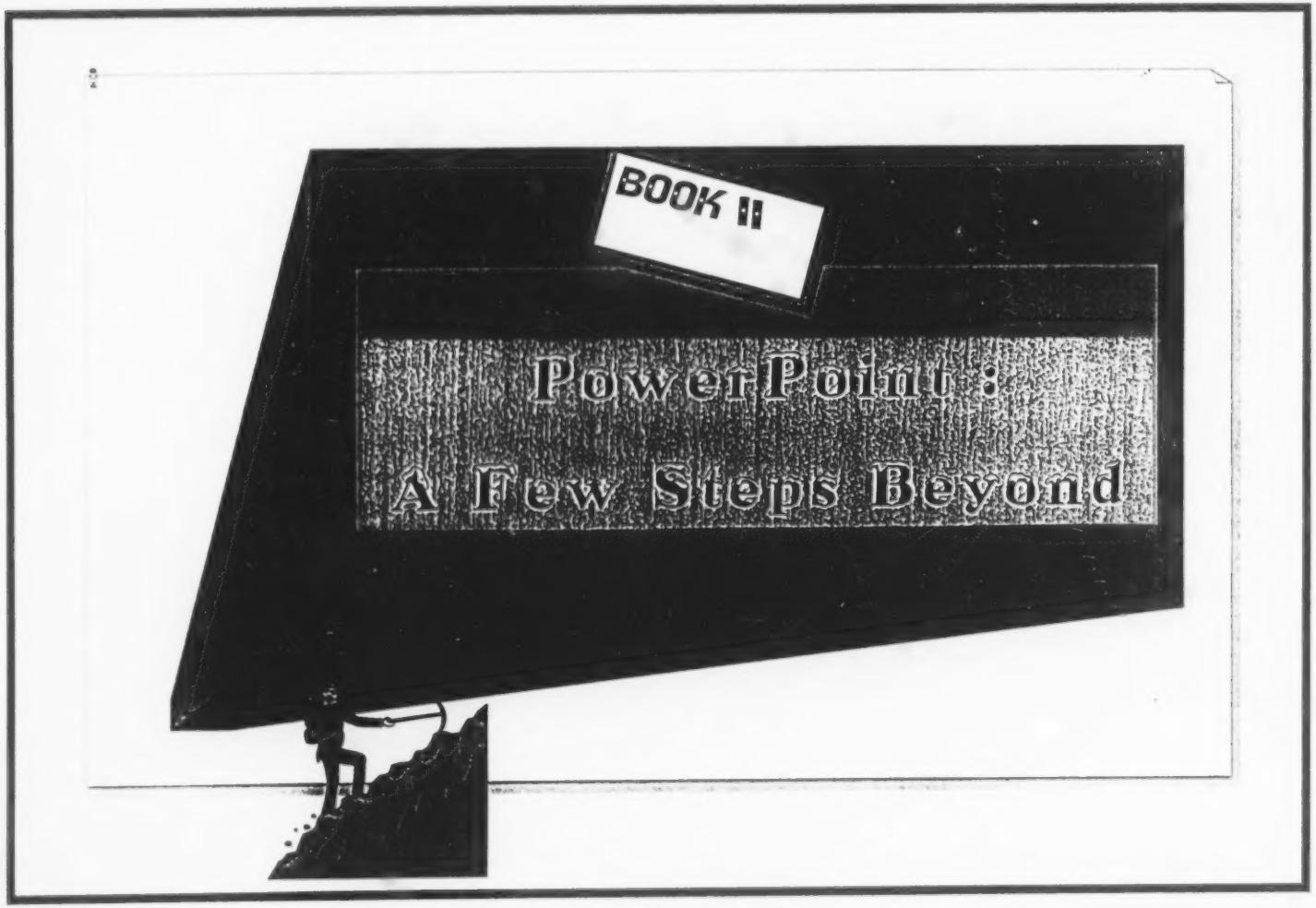

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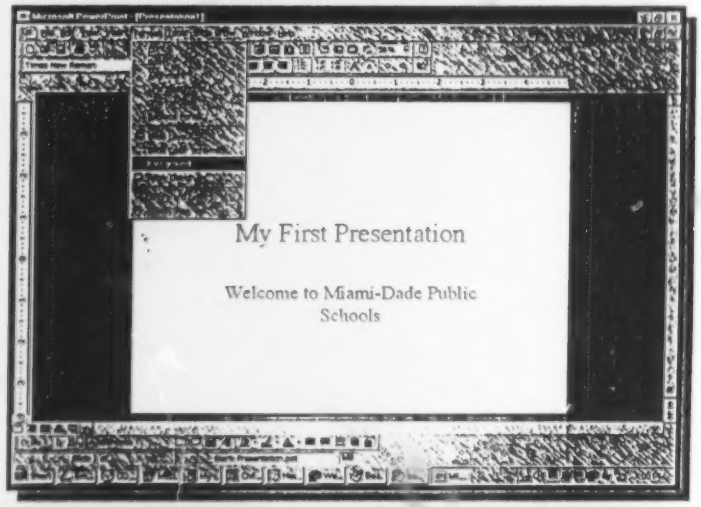
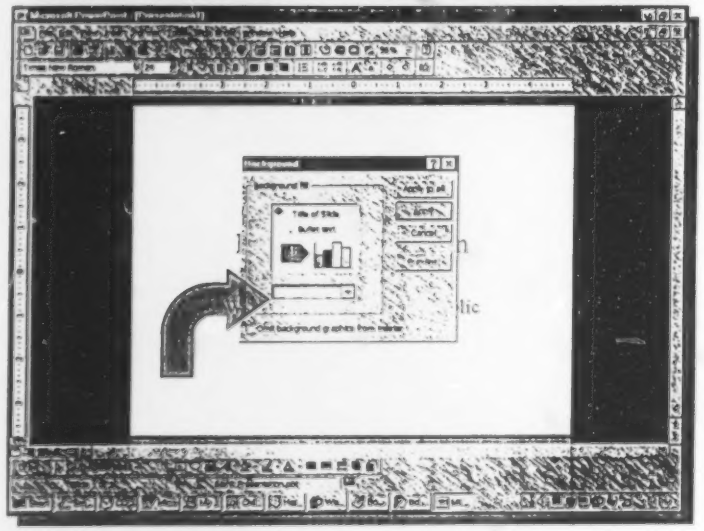
TaskCard # III: Formating The Background

1. Select and Click on FORMAT on the menu bar. Scroll to BACKGROUND. Let go of the mouse button or click.

2. Select and Click on the arrow located on the right side of the Dialog Box at the bottom of the page.





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3. To select a solid color of your choice Select and Click on MORE COLORS.

4. Select the color of your choice by selecting and clicking on it.

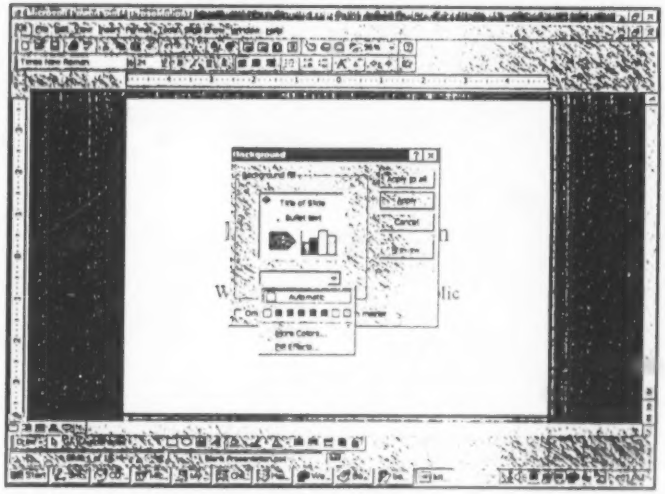
5. Select and Click OK.

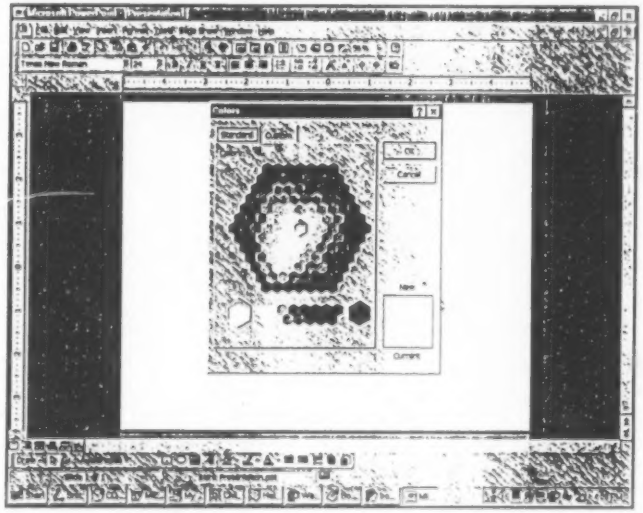
6. When you return to the previous screen (top figure),

A) Select and Click on APPLY to apply this color to that particular slide.

B) Select and Click on APPLY TO ALL to apply that color to all your slides.

GO TO THE NEXT SLIDE





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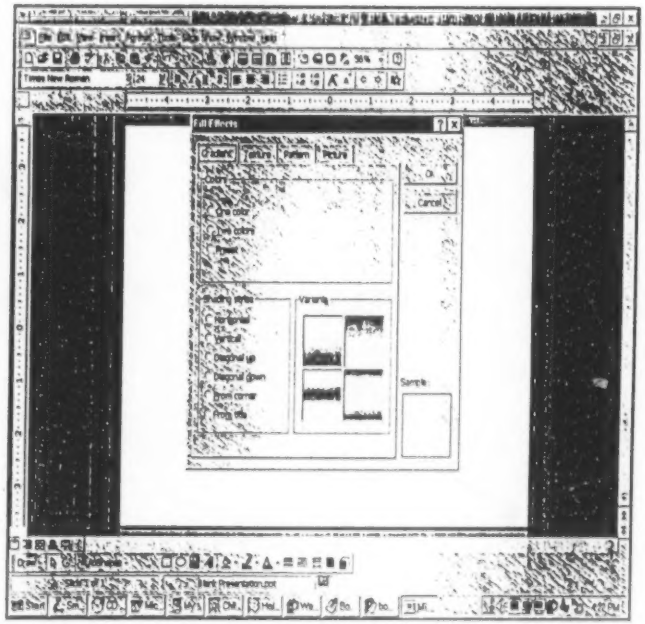
To add FILL EFFECTS to the background, repeat steps 1 ,2,and 3

Then

7. In step # 3, instead of selecting MORE COLORS, select and click on FILL EFFECTS

The instructor will model and walk you through the many options you can use to customize your background.



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TaskCard # IV: Inserting a ClipArt or Picture

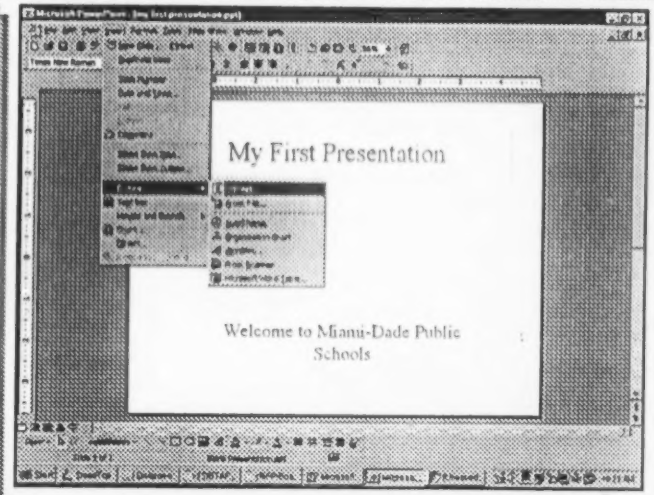
1. Make sure that the file **"My First Presentation"** is opened. If not, follow the directions in Taskcards II and III .

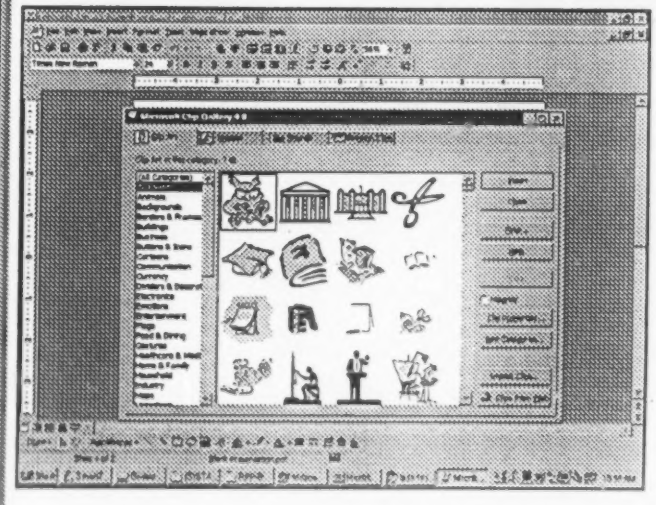
2. SELECT and Click on INSERT on the Menu Bar. Scroll down to PICTURE. Then scroll to the right to CLIPART or FROM FILE.

3. If you select CLIPART, your should follow the directions. Select the clipart of your choice from the Gallery or your CD. SELECT and click OK.

4. If you select from file, you should go and select the picture/photo file you want to insert. Usually, the source of your file will be the A: drive or the C: drive.

5. After you select the clipart and or picture, use the HANDLES to minimize, maximize it of move it around in your presentation.





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TaskCard # V: Inserting Sounds and Movie Clips from the Gallery

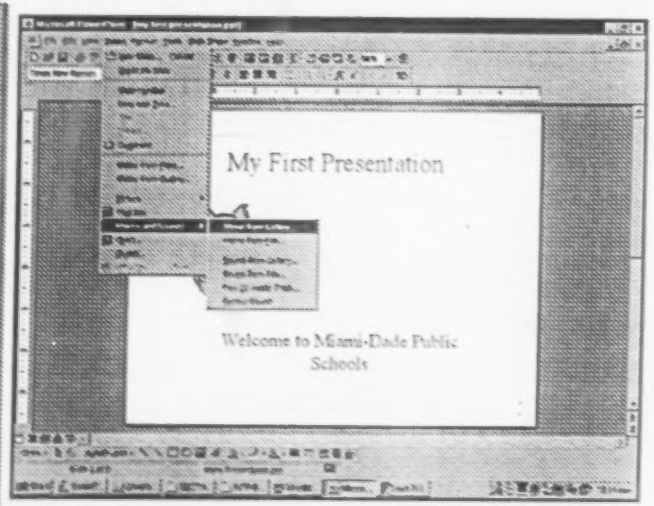
1. SELECT and Click on INSERT on the Menu Bar. Scroll down to MOVIES AND SOUNDS. Then scroll to the right to MOVIE FROM GALLERY.

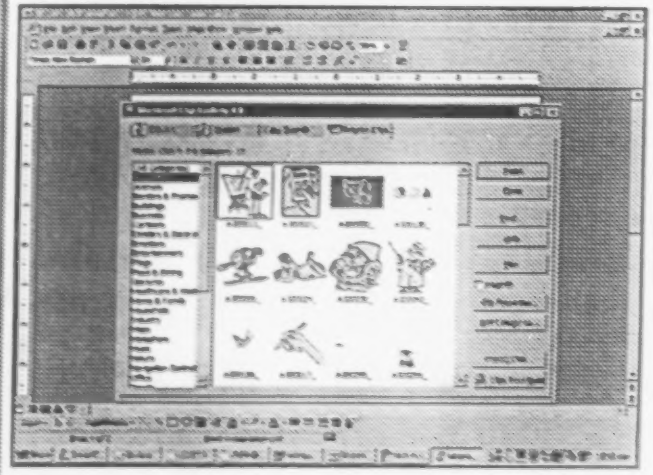
2. Select the category and the Movie Clip of your choice. SELECT and click INSERT. Use the HANDLES to minimize, maximize , or move the animation around in your presentation.

3. When you play your slide, you need to SELECT and CLICK on the animation to activate it.

4. To insert a sound, repeat step 1. Instead of SELECTING movie from gallery, SELECT SOUNDS FROM GALLERY.

5. You may play the sound before you SELECT and click on INSERT. Like the movie clip, you need to click on the sound icon to activate it.





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TaskCard # VI: Inserting a HYPERLINK

While running your presentation, you may "hyperlink" to a Web Page on the Internet, a file, or object.

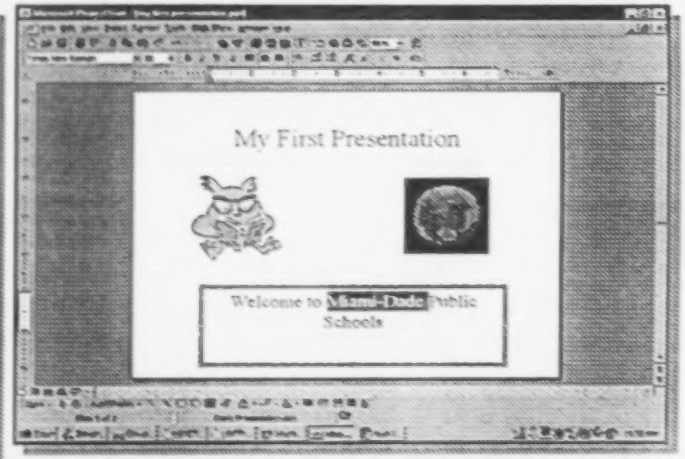
1. SELECT and highlight the word or expression you want to "hyperlink". For this exercise, select and highlight the word MIAMI-DADE on the first slide of **My First Presentation"**

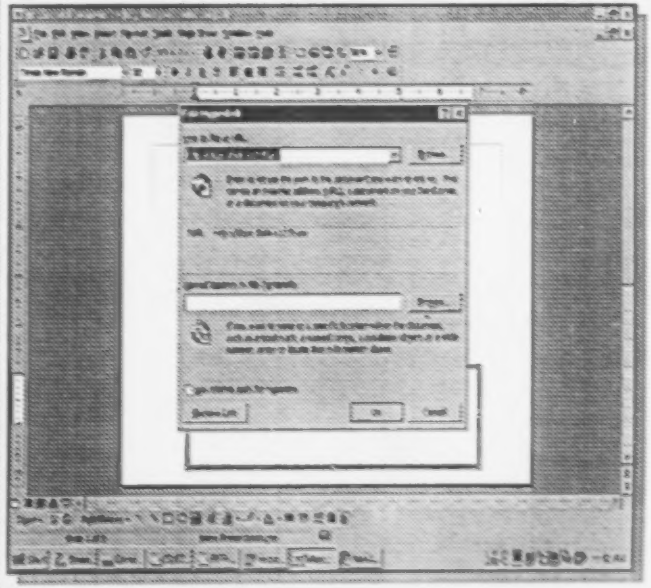
2. SELECT and CLICK on INSERT on the menu bar. Scroll down to HYPERLINK. Click or let go of the mouse.

3. In the dialog box, type the following URL.

http://dcps.dade.k12.fl.us

4. Select and click OK. The word Miami-Dade should turn blue. When you click on it during your show, this action will take us to the M-DCPS Home Page.





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TaskCard # VII: Adding Animation

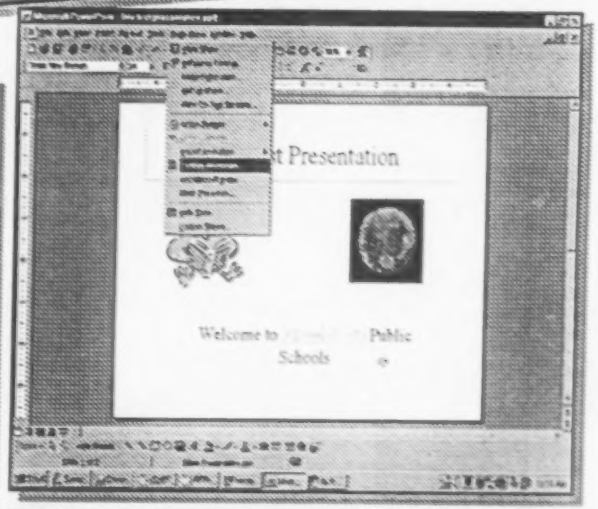
Save the file **My First Presentation**. Follow the directions in TaskCards # II and III to play it. Kind of bland ...isn't it ?! Let's jazz it up with some animation ! !

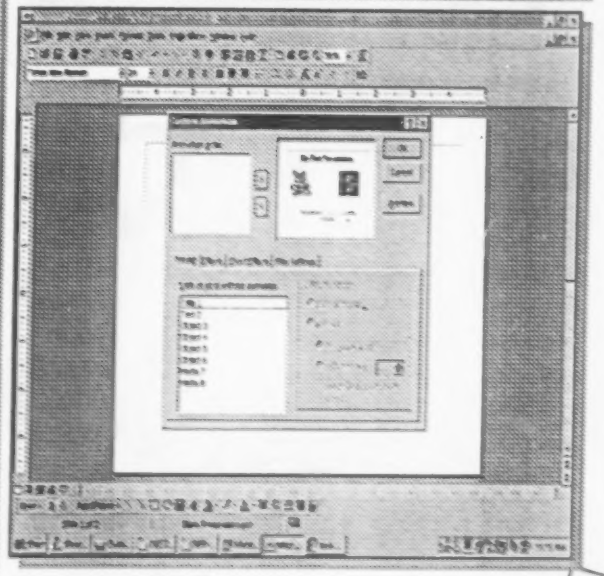
1. SELECT and CLICK on SLIDE SHOW on the menu bar.

2. Scroll down to CUSTOM ANIMATION. Click or let go of the mouse button.

3. Click on the tab labeled TIMING - lower left hand corner of the Animation Window. You should see a list of all the objects in that particular slide. If you do not know what they are, click on one. Then look at the mini-window - top right handside. It should be activated.

4. You can decide which object is animated first at this time. Or, you may re-arrange the order of animation later.





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5. Select Title 1 in the Timing mini-window.

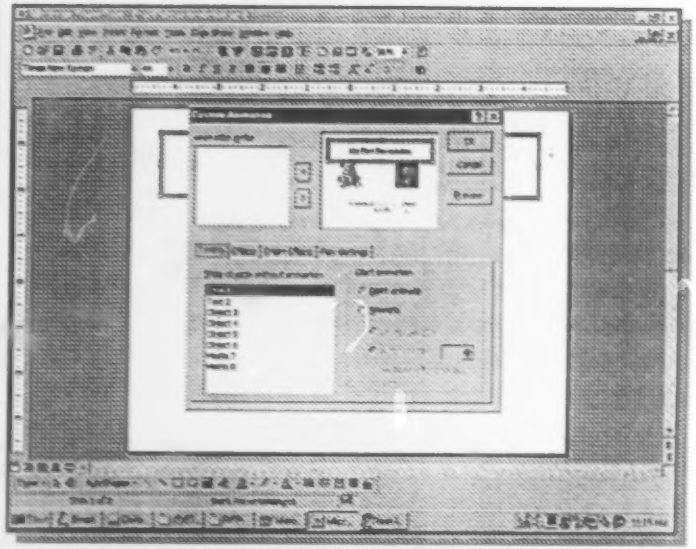
6. Then SELECT the EFFECTS tab. Choose an effect of your choice by holding the dialog box arrow and scrolling down. You may preview your animations in the mini preview window- top right.

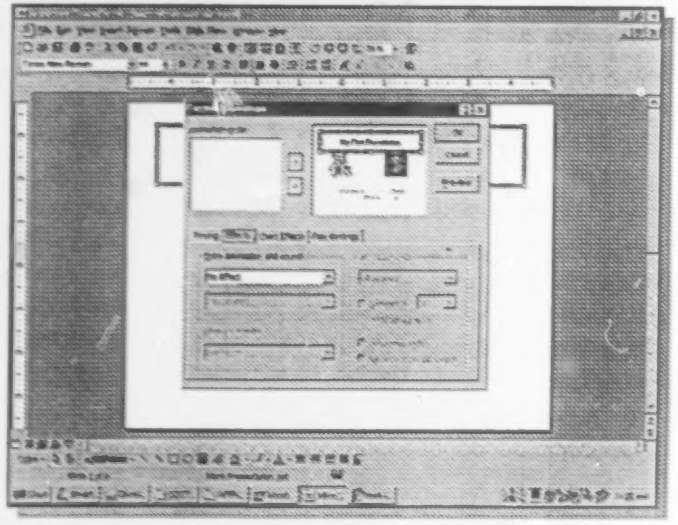
7. You may choose to add a sound to go with that particular action.

8. Repeat steps 1-5 to animate the other objects. REMEMBER: there are so many animation you can add. Also, too much animation may distract the audience from the content !

9. Select and Click OK. Now, play your slides again ! What a difference !

GO TO THE NEXT PAGE !





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TaskCard VIII : Where do we go from here ?

Take a few moments to practice the tasks in TaskCards # II to VII. The instructor will model and walk you through the following features of PowerPoint:

- Hide Slide (Slide Show)
- Slide Transition (Slide Show)
- Set Up Show (Slide Show)
- Action Buttons (Slide Show)

- PowerPoint Central (Tools)

- Apply Design (Format)

- Using Shapes
- Slide Layout (View)

You can also PACK AND GO your presenation and play it at a WorkStation that does not have the software PowerPoint loaded !

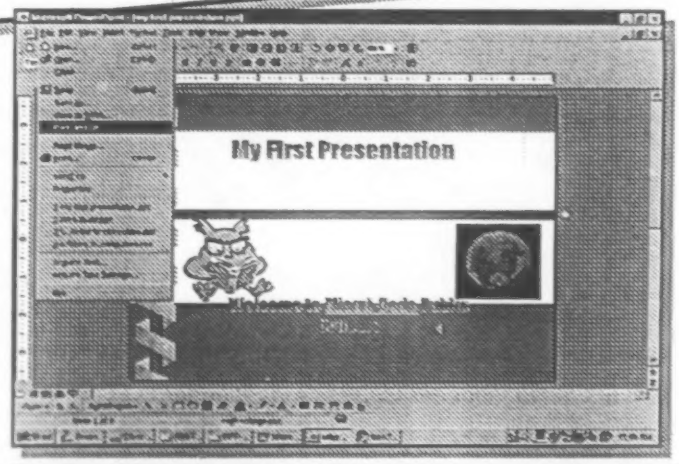
TaskCard IX #: Saving PowerPoint as PACK & GO ?

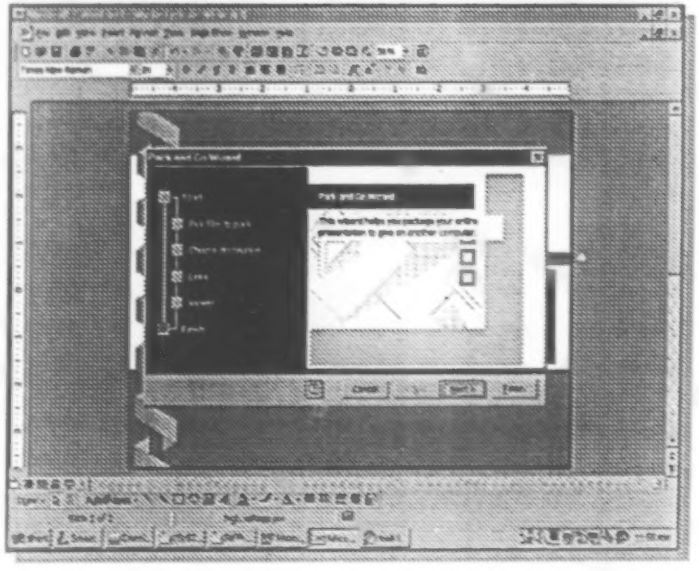
1. Select and click on FILE. Scroll to PACK & GO. Click or let go of the mouse button.

2. Follow the directions. DO NOT INCLUDE THE VIEWER unless you absolutely have to ! (takes too many diskettes to load !)

3. To retrieve your PACK & GO file, put your diskette in the drive. Use MY COMPUTER to open the diskette.

4. Double click on the PPT. Exe setup. Follow the directions. We will model and demonstrate in class.





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